54M/ 150M/300Mbps

USB WIRELESS ADAPTER

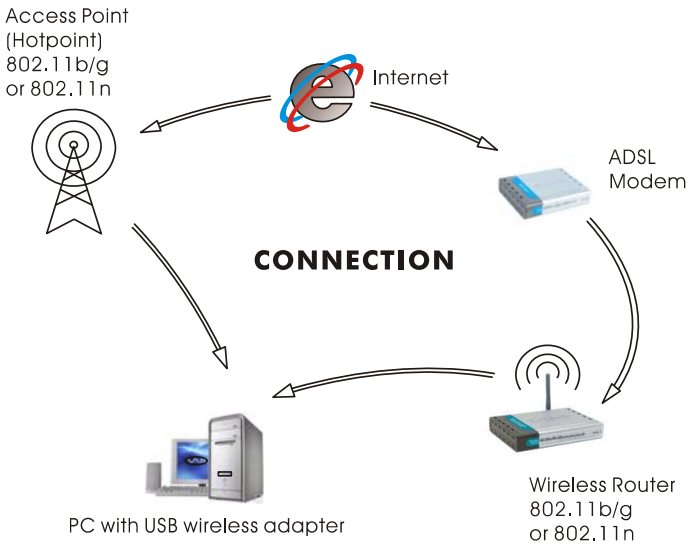
User’s Manual

Version 1.3

Introduction

Thank you for purchasing the IEEE 802.11b/g or 802.11n Wireless USB Adapter. This Wireless Adapter is easy to use and easy to setup. If you have been tired of dealing with all those messy wires to connect a laptop or PC to office or home network, this Wireless adapter is an ideal access solution for wireless Internet connection.

A typical Internet access application for the USB wireless adapter is shown as the following figure:



There are two different ways to access Internet:

1. With a wireless adaptor, receiving and transferring signal via a wireless router, then passed to an ADSL modem, then to local ISP (Internet service supplier) through a telephone line.
2. With a wireless adaptor, receiving and transferring signal via local AP (Access Point) or so called Hotpoint directly.

Tips: *An 802.11 LAN is based on a cellular architecture where the system is subdivided into cells, where each cell (called Basic Service Set or BSS) is controlled by a Base Station (called Access Point, or in short AP)*.

Package Contents:

- One 54Mbps 802.11b/g or 150Mbps 802.11n or 300Mbps 802.11n USB Wireless Adapter.
- Adapter Installation disc.
- User's Manual.
- Antenna (Optional)

Warranty

The warrants for the end user ("Customer") that this hardware product will be free from defects in workmanship and materials, under normal use and service, for twelve (12) months from the date of purchase from its authorized reseller. Information in this document is subject to change without prior notice.

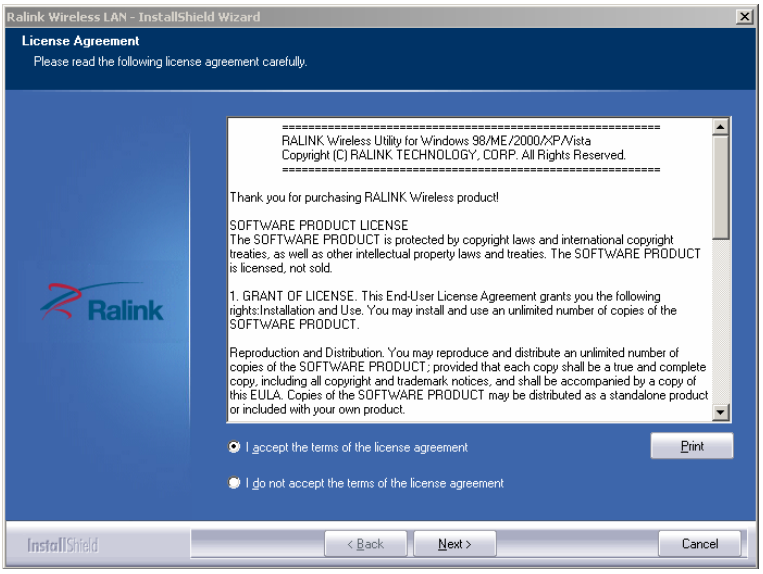
Installation

To install the driver of the USB adapter, please use administrator user account to login before the following steps:

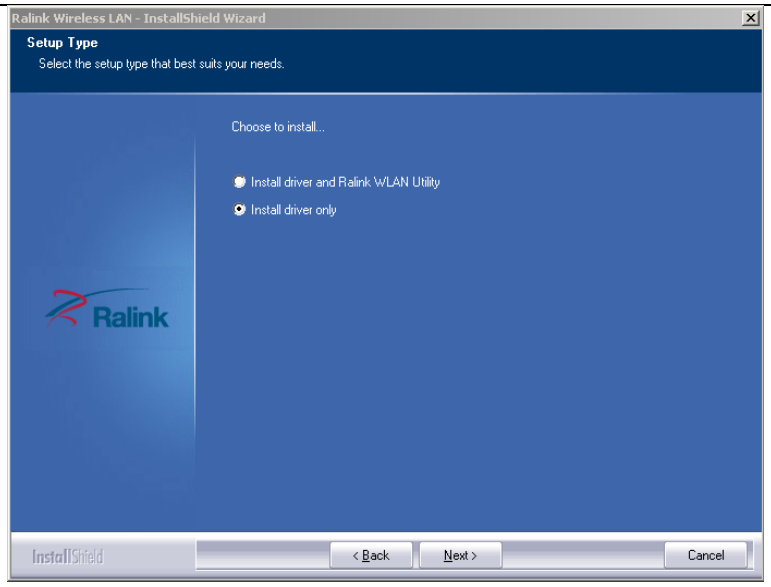
Tips: *the latest original drivers can be downloaded from the website of Ralink company. The current website is http://www.ralinktech.com/ralink/Home/Support.html . To find a correct driver, please identify the chipset type applied in the adapter you have.*

1. For a 54Mbps 802.11b/g or a 150Mbps or 300Mbps 802.11n adapter, double click Ralink_54&150M&300M.exe program or the individual program for dedicated chipset, which is located in the driver folder in the installation disc. Such as: G:\driver\ Ralink_54&150M&300M.exe; or RT2070_54Mbps&RT3070_150Mbps; or RT2571_54Mbps.
2. Follow the instructions and prompts of the "InstallShield Wizard" to finish the driver installation:

a. Select the "I accept the terms of the license agreements", then click the "Next".


Ralink Wireless LAN - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
RALINK Wireless Utility for Windows 98/ME/2000/XP/Vista
Copyright (C) RALINK TECHNOLOGY, CORP. All Rights Reserved.
Thank you for purchasing RALINK Wireless product!
SOFTWARE PRODUCT LICENSE
The SOFTWARE PRODUCT is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The SOFTWARE PRODUCT is licensed, not sold.
1. GRANT OF LICENSE. This End-User License Agreement grants you the following rights:Installation and Use. You may install and use an unlimited number of copies of the SOFTWARE PRODUCT.
Reproduction and Distribution. You may reproduce and distribute an unlimited number of copies of the SOFTWARE PRODUCT; provided that each copy shall be a true and complete copy, including all copyright and trademark notices, and shall be accompanied by a copy of this EULA. Copies of the SOFTWARE PRODUCT may be distributed as a standalone product or included with your own product.
I accept the terms of the license agreement
I do not accept the terms of the license agreement
Print
InstallShield
< Back
Next >
Cancel

b. There shows a setup type window, you can select "Install driver only" or "Install driver and Ralink WALN utility" and then click the "Next".

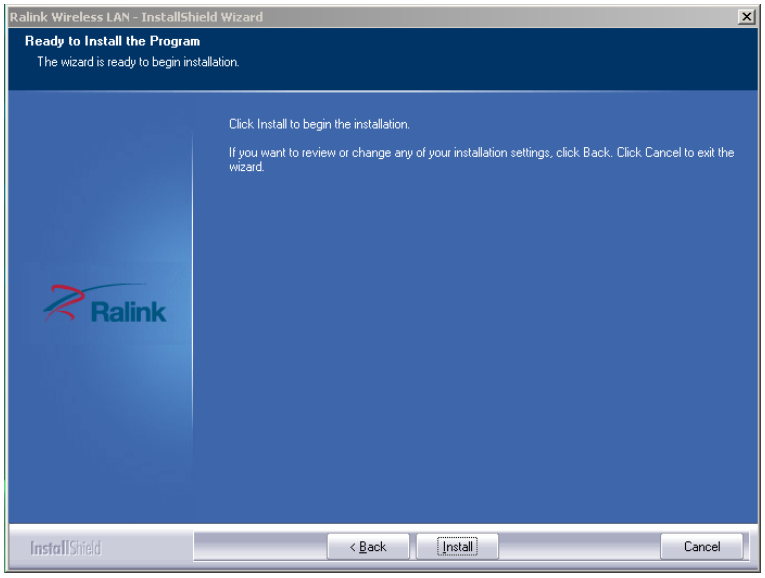


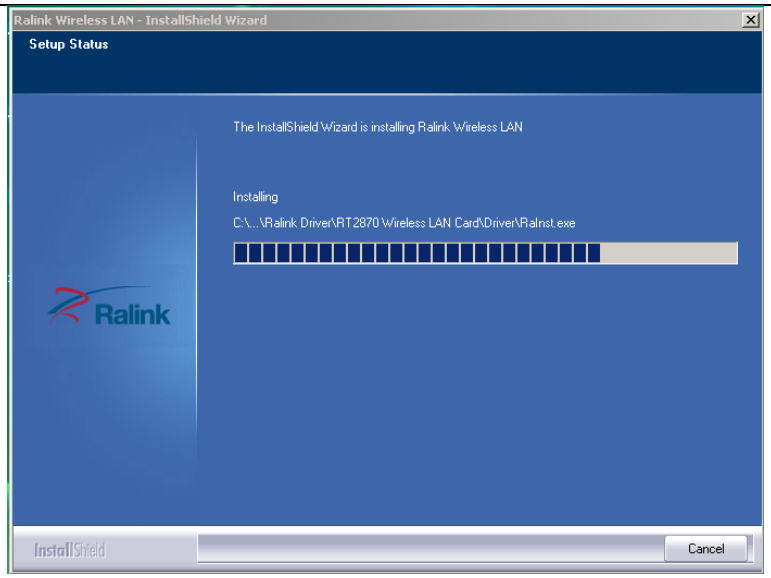
Tips:

1).The Windows XP utilizes a "Wireless Zero Configuration(WZC)" Service built into the operating system. Many wireless network adapter cards utilize this service.

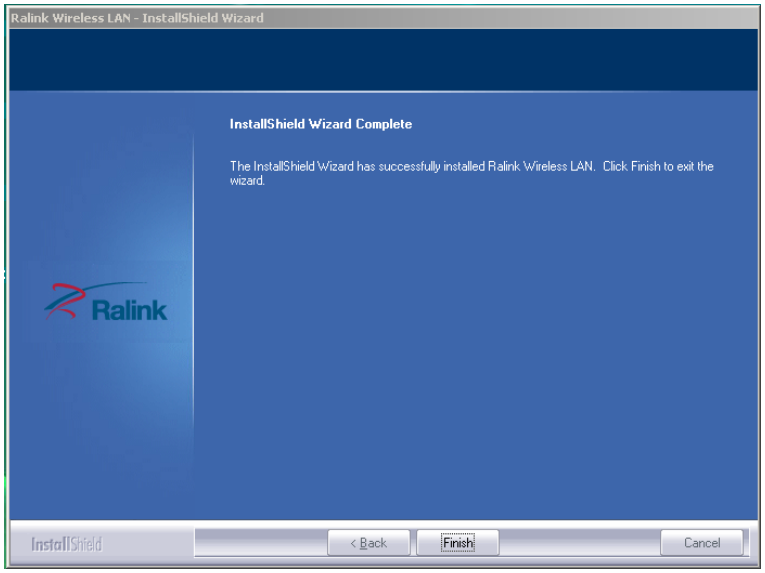
2). Ralink- the chipset manufacturer has developed a utility for setting up wireless connection. If you select this item, you can switch between the Windows XP's WZC service and the Ralink WLAN utility service later.

c. Click the "Install" to confirm the installation, there shows the installation progress.


Ralink Wireless LAN - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
Ralink
InstallShield
< Back
Install
Cancel



d. Click "finish" to finish the driver installation.

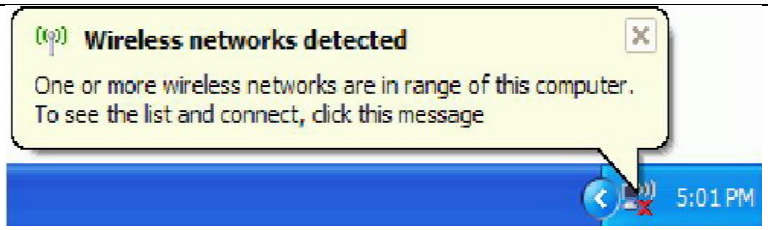


Wireless Connection

1. After finishing driver installation, insert the USB adapter to Notebook or PC that supports USB 2.0/1.1 interface.

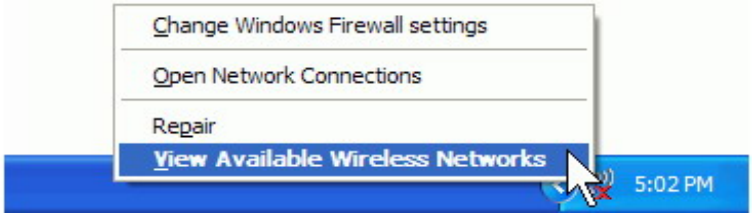
Remarks: Make sure to connect the adapter to an USB port on your computer directly rather than an USB hub. Although it might work when connecting with an USB hub, the likelihood of configuration problems will be higher.

2. The system shows a wireless utility icon in the Windows system tray, which locates in the bottom-right corner of your computer screen, and pops up a message that indicates a new hardware is found and installed, something like this:


Wireless networks detected
One or more wireless networks are in range of this computer.
To see the list and connect, click this message
5:01 PM

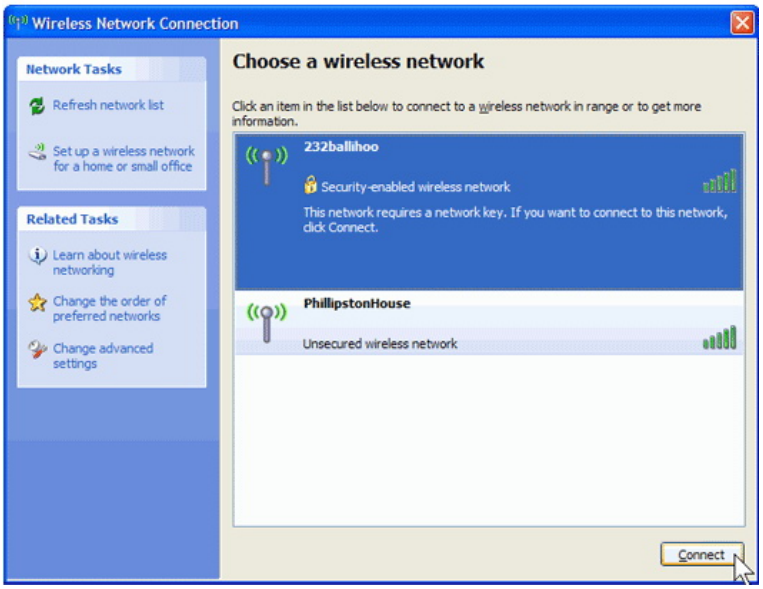
Should the service " Wireless Zero Configuration (WZC)" be applied.

1. Double-click the utility icon or right click the icon and then select "View Available Wireless Networks" to launch the utility, the Wireless Network Connection window appears and displays your wireless network listed with the SSID you chose.



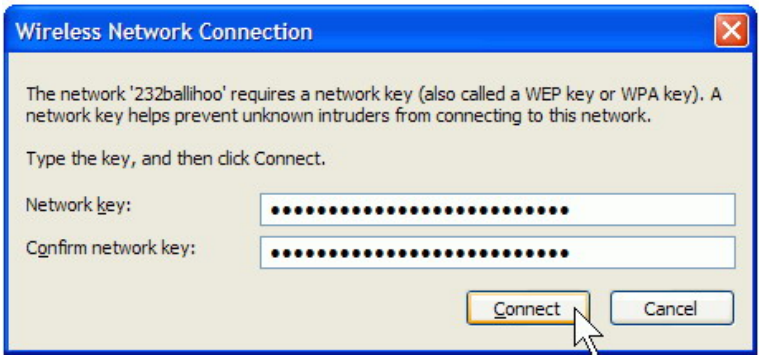
Notes: *Before configuring your WiFi access, you need to have your network's SSID (Service Set Identifier), security key and authentication type handy. Check the documentation coming with your router, ask your network administrator to get the information.*

2. If you don't see your network, click "Refresh network list" in the upper left corner. If you are locating within the valid range of hotspots or wireless routers, all available networks will be recognized and listed automatically. Click your preferred network, and then click "Connect" in the lower right corner.


Wireless Network Connection
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
232ballihoo
Security-enabled wireless network
This network requires a network key. If you want to connect to this network, click Connect.
PhillipstonHouse
Unsecured wireless network
Connect

3. If the network security key hasn't been inputted before, Windows XP prompts you to enter the network's security key to access the wanted SSID. Type the encryption key that you

wrote down earlier in both the Network key and Confirm network key boxes, and then click "Connect".


Wireless Network Connection
The network '232ballihoo' requires a network key (also called a WEP key or WPA key). A network key helps prevent unknown intruders from connecting to this network.
Type the key, and then click Connect.
Network key:
Confirm network key:
Connect
Cancel

Tips: *If there are free hotspots, simply select the network you want from the list displayed, then click Connecting. It tries to launch your Internet browser—you should be connected to the Internet.*

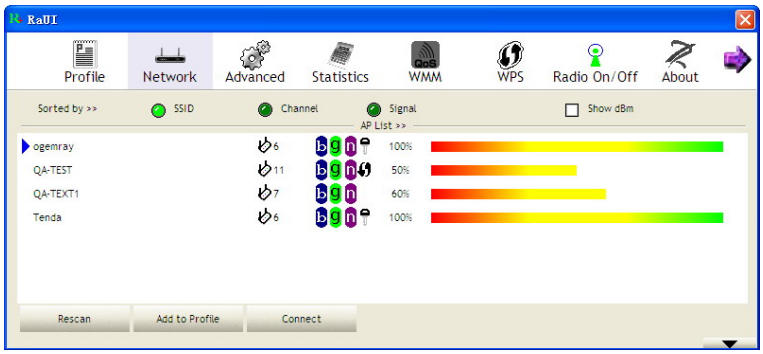
If there is a pay hotspot, signing in or up will require either to enter your login information-if you're an existing customer, or to enter your credit card information for payment, it is just decided by you. Then clicking the Connecting, your default Internet browser will launch and take you to the service provider's login page. Most providers have very simple and step-by-step instructions for you to sign up and then to be connected. Another way to access the service provider's login page is to simply launch your Internet browser, if there's a pay network available, you'll be taken directly to the login page.

Should the service of Ralink wireless connection utility be applied.

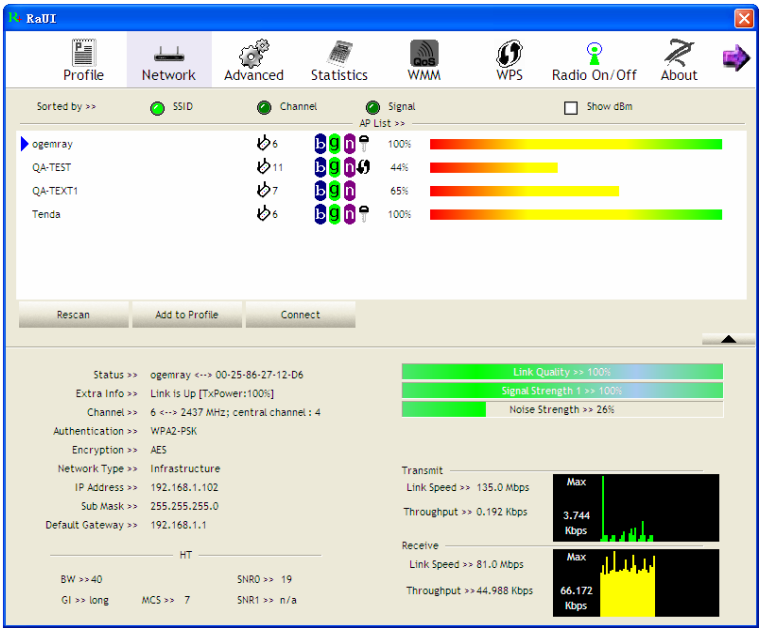
After the installation of Ralink utility, the system shows a special wireless utility icon in the Windows system tray, which locates in the bottom-right corner of your computer screen:

The icon changes colors according to the wireless signal quality, after an USB wireless adapter is inserted into an USB 2.0/1.1 port of Notebook or PC.

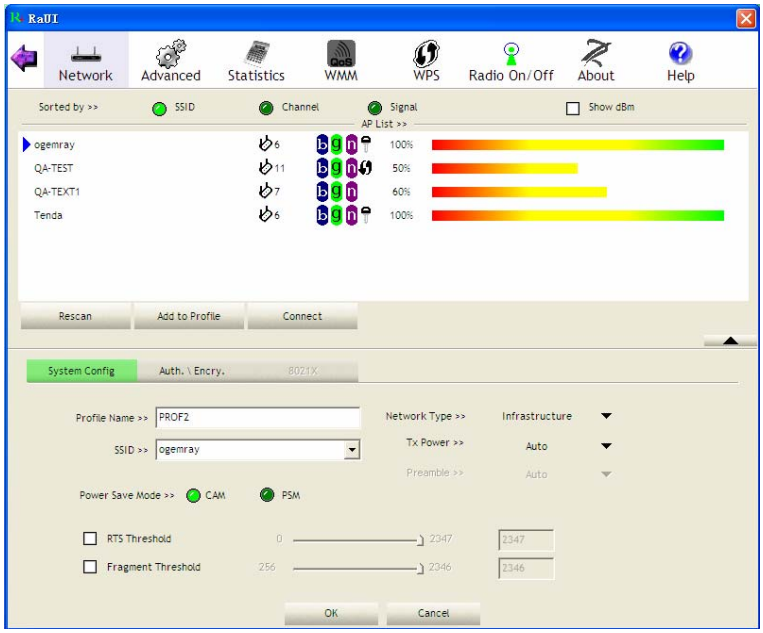
1. Double click the icon or right click the icon and then select "Launch Config Utility" to launch the utility, the RaUI window appears like:



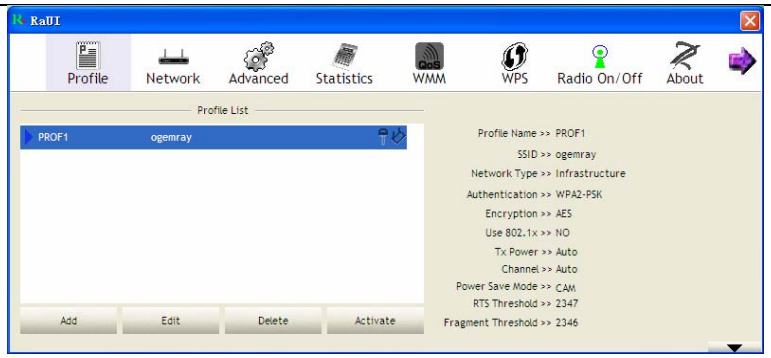
2. Click the Network tab, all available networks are recognized and listed automatically. You can click the "Rescan" to update the list. A triangle at the left of the SSID list column indicates the SSID connected.

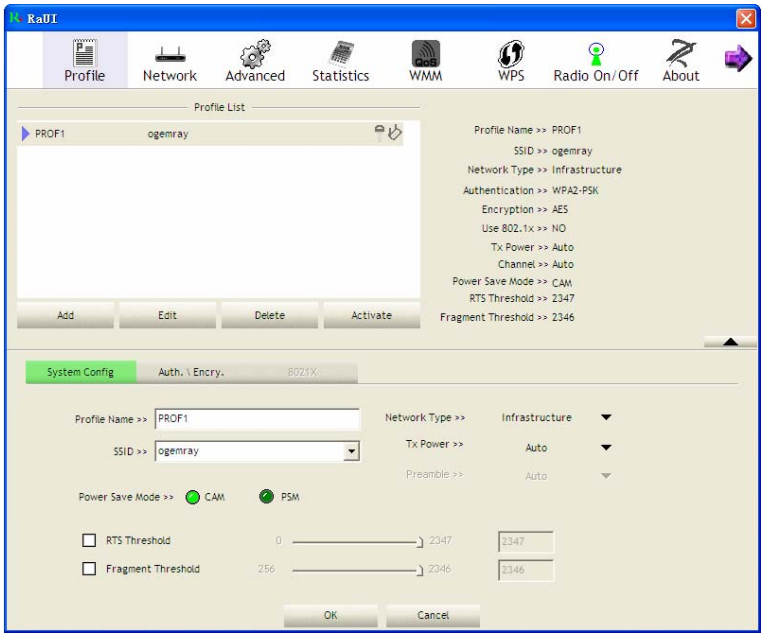


3. If the connected SSID is not your preference, you can click the one you like, and click "Connect".

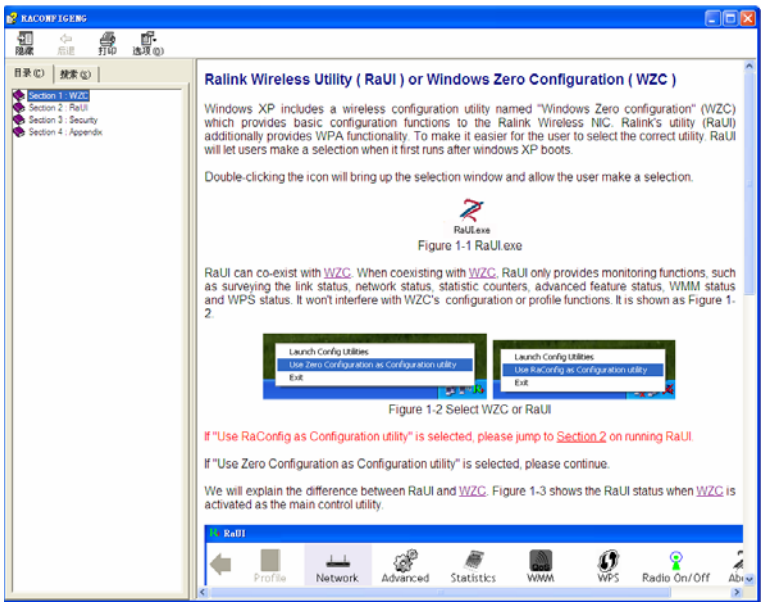


4. If the encryption key has not been saved before, click on the Profile tab, Inside this tab, it allows you add, edit, delete, and activate the selected SSID. Enter the encryption type and key for the selected SSID, and save all the settings as your preference by clicking "OK".





For more details about the RaUI utility, please read the help information of the utility.


Ralink Wireless Utility (RaUI) or Windows Zero Configuration (WZC)
Windows XP includes a wireless configuration utility named "Windows Zero configuration" (WZC) which provides basic configuration functions to the Ralink Wireless NIC. Ralink's utility (RaUI) additionally provides WPA functionality. To make it easier for the user to select the correct utility. RaUI will let users make a selection when it first runs after windows XP boots.
Double-clicking the icon will bring up the selection window and allow the user make a selection.
RaUI.exe
Figure 1-1 RaUI.exe
RaUI can co-exist with WZC. When coexisting with WZC, RaUI only provides monitoring functions, such as surveying the link status, network status, statistic counters, advanced feature status, WMM status and WPS status. It won't interfere with WZC's configuration or profile functions. It is shown as Figure 1-2.
Figure 1-2 Select WZC or RaUI
If "Use RaConfig as Configuration utility" is selected, please jump to Section 2 on running RaUI.
If "Use Zero Configuration as Configuration utility" is selected, please continue.
We will explain the difference between RaUI and WZC. Figure 1-3 shows the RaUI status when WZC is activated as the main control utility.

Tips for Wi-Fi users

With a Wi-Fi connection, you can roam about 150 feet around the access point (depends on different environment), so find a spot where you can work without any interruption. Then see how much work you can do, such as:

- Easily and quickly receive and transmit files within your local network — no problem for big files.
- Access your email and surf the web with the same speed as that connected with network cables.
- Synchronize data between devices.
- Take advantage of wireless printing — send files directly from your laptop PC to a wireless printer over Wi-Fi connection.

Warning

Wi-Fi offers greater speed and range than Bluetooth, but it drains your portable device batteries a lot faster than Bluetooth does. In fact, if you use a Wi-Fi connection regularly on your laptop PC, you'll undoubtedly notice that you need to recharge more often. If you need to conserve battery life — on a long trip for example — turn off your Wi-Fi connection when you don't actually need it.

Security

Because wireless networks rely on radio signals to transmit data, they are not as secure as wire network. Wireless networks are susceptible to viruses and breaches like eavesdropping and need to be protected in order to be secure.

There are many security measures to safeguard wireless networks, protect the data, and keep unauthorized users out. Hotspots, on the other hand, are often free of standard security practices in an effort to make it easy for anyone to connect. It may be found that some pay hotspots administered by service providers offer have some level of security, however, when using a hotspot, it's always a good idea to be proactive and to employ security measures of your own.

Key terms

Wi-Fi: Short for "wireless fidelity," a generic label that refers to wireless networks or networking.

Hotspot: A specific geographic location in which an access point provides public wireless broadband network services to mobile visitors through a WLAN.

Throughput: The amount of data transmitted in a set amount of time.

Bandwidth: the amount of data that can be carried from one point to another in a given time period (usually a second).

Chipset: A group of microchips that execute various functions (like memory) to support the CPU.

Specifications

Protocol and Standards	IEEE 802.11b/g or 802.11n
Interface	USB1.1, USB2.0
Frequency Band	2.412~2.4835GHz (Depends on different countries' regulation)
Data Rate	For 802.11b/g: Peak rate 54Mbps, Peak throughput: 27Mbps.

	For 802.11n 1T1R. Peak rate: 150Mbps, Peak throughput: 90Mbps 1T2R. Peak rate: 300Mbps, Peak throughput: Rx 160Mbps
Transmit Power	(Typical) 802.11b/g:17dBm , 802.11n: 16 dBm.
Data Security	WEP 64/128 , WPA, WPA2, 802.1X
Power Consumption	It depends on different adapter models, there are two typically values: 330mA and 110mA in full Transmit (TX), 290mA and 95mA in full Receive (RX)
Transmission Distance	Indoor up to 100m, outdoor up to 300m (Standard transmission distance, it is affected depending on different environment).
Environment	Operating Temperature: 0°C~50°C Storage Temperature: -20~70°C Operating Humidity: 10%~90% non-condensing Storage Humidity: 5%~95% non-condensing
Operating System	It supports Windows CE/2000/XP/Vista; Linux; Mac OS X. The drivers might be supplied basing on one or two system.